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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/805,955	03/22/2004	Charles E. Anderson JR.	090936.0551	9889

31625 7590 10/21/2004

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PATENT DEPARTMENT  
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AUSTIN, TX 78701-4039

EXAMINER
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JOHNSON, STEPHEN

ART UNIT	PAPER NUMBER
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3641

DATE MAILED: 10/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/805,955

Applicant(s)

ANDERSON ET AL.

Examiner

Stephen M. Johnson

Art Unit

3641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 07 September 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 and 15-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-25 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3/22/2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

Art Unit: 3641

1. Applicant's election without traverse of the species directed to a plug layer 120 of composite material as illustrated in fig. 6A and an accelerating layer 110 of aluminum oxide material as illustrated in fig. 8A in the reply filed on 9/7/2004 is acknowledged.

Claims 1-25 read on the elected species and an action on these claims follows.

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 18 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The application as filed does not teach or describe a ceramic material for the accelerating material that is a single oxide.

4. Claim 18 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The application as originally filed does not enable one of ordinary skill to make an accelerating material that is a ceramic that is a single oxide.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 3641

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-13, 15-16, 19-21, and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Giraud.

Giraud discloses a multi-layered armor comprising:

- |  |                                     |
|--|-------------------------------------|
| a) an outer accelerating layer;  | 51 or 61                            |
| b) a plug layer;   | 52 or 62                            |
| c) an energy absorbing layer;  | 53 or 63 or 2                       |
| d) plug accelerated in motion before the projectile<br>perforates the plug;                                    | see fig. 4b                         |
| e) the plugs are made of a material different from the<br>material of the accelerating layer;                  | col. 5, lines 14-19                 |
| f) the plug is operable to obtain the velocity of the<br>projectile before the projectile perforates the plug; | see fig. 4b; col. 4,<br>lines 16-48 |
| g) wherein the projectile-plug combination is formed<br>prior to projectile perforation of the plug;           | see fig. 4b                         |
| h) plugs of a composite material;  | col. 5, lines 14-19                 |
| i) the accelerating layer is made of a ceramic; and  | col. 5, lines 14-19                 |
| j) the energy absorbing material is a fabric material<br>or polymeric fiber material.                          | col. 6, lines 9-19                  |

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

Art Unit: 3641

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Giraud in view of Jones.

Giraud applies as previously recited. However, undisclosed is a ceramic plate that is alumina or a single oxide. Jones teaches a ceramic plate that is alumina (col. 1, lines 10-12) as well as a ceramic plate that is a single oxide (see claim 3). Applicant is substituting one material type of ceramic for another in an analogous art setting as explicitly encouraged by both the primary and secondary references (see col. 5, lines 14-19 of Giraud and claim 3 of Jones). It would have been obvious to a person of ordinary skill in this art at the time of the invention to apply the teachings of Jones to the Giraud armor and have an armor with a ceramic material of a specific type.

9. Claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Giraud in view of Cohen (908 B1).

Giraud applies as previously recited. However, undisclosed is a ceramic plate that is titanium diboride or a single oxide. Cohen (908 B1) teaches a ceramic plate that is titanium diboride (see claim 13) as well as a ceramic plate that is a single oxide (see claim 13). Applicant is substituting one material type of ceramic for another in an analogous art setting as explicitly encouraged by both the primary and secondary references (see col. 5, lines 14-19 of Giraud and claim 13 of Cohen). It would have been obvious to a person of ordinary skill in this art at the time of the invention to apply the teachings of Cohen (908 B1) to the Giraud armor and have an armor with a ceramic material of a specific type.

Art Unit: 3641

10. Claims 22-24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Giraud in view of Cohen (635).

Giraud applies as previously recited. However, undisclosed is an absorbing layer that is Kevlar (an aramid fiber) or a polyethylene material. Cohen (635) teaches an absorbing layer that is Kevlar or polyethylene fiber material (see col. 7, lines 51-56). Applicant is substituting one material type for another as explicitly encouraged by both the primary and secondary references (see col. 5, lines 14-19 of Giraud and col. 7, lines 51-56 of Cohen (635)). It would have been obvious to a person of ordinary skill in this art at the time of the invention to apply the teachings of Cohen (635) to the Giraud armor and have an armor with an absorbing layer of a particular type of fiber material.

11. Claim 14 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

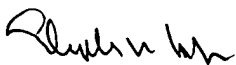
12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Dischler et al., Clausen, Kelsey, and Burgess et al. disclose other state of the art armor arrangements.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. Johnson whose telephone number is 703-306-4158. The examiner can normally be reached on Tuesday through Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on 703-306-4198. Any inquiry of a general nature or relating to the status of this

Art Unit: 3641

application or proceeding should be directed to the receptionist whose telephone number is 703-306-4177.

The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9326. The fax phone number for after final communications is (703) 872-9327.



STEPHEN M. JOHNSON  
PRIMARY EXAMINER

Stephen M. Johnson  
Primary Examiner  
Art Unit 3641

SMJ